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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/779,402

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Steven J. McCarthy

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EXAMINER

NGUYEN, MINH CHAU

ART UNIT

PAPER NUMBER

2445

NOTIFICATION DATE

DELIVERY MODE

02/04/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/779,402	<b>Applicant(s)</b> MCCARTHY ET AL.	
	<b>Examiner</b> MINH-CHAU NGUYEN	<b>Art Unit</b> 2445	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 November 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,6,8-10,12,14,15,17,18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,6,8-10,12,14,15,17,18 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |



### **DETAILED ACTION**

This action is responsive to the amendment of the applicant filed on 11/11/08.

Claims 1-3,5-6,8-10,12,14-15,17-18,20 are presented for further examination.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3,5-6,9-10,12,14-15,17-18,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert et al. (Albert) (US 6,970,913 B1) and further in view of Richter et al. (Richter) (US 2003/0046396 A1).

2. Claim 1, Albert teaches a communications system comprising:

a plurality of servers (i.e. servers 1-3) connected together in a network (i.e. network 210) for processing a plurality of different job types (i.e. processing incoming and outgoing packets or handling different connections) having respective same resource usage characteristics (i.e. usage of processing capacity) associated therewith (Col. 6, L. 51-55; and Col. 13, L. 60-65; and Col. 30, L. 14-31; and Col. 31, L. 53-59);

each server determining a respective health metric thereof based upon at least one job being processed (i.e. determining a usage of processing capacity

for each of the virtual machine that is being implemented) thereby and weighting the health metric (i.e. weighting the usage of processing capacity) based upon the respective resource usage characteristic of the at least one job (i.e. at least one virtual machine) (figure 14; and Col. 30, L. 1-31; and Col. 31, L. 53-59; and Col. 32, L. 49-51); and

said servers mapping the weighted health metrics (i.e. weights) for same resource usage characteristics to a common scale (i.e. a common level) (Col. 3, L. 51-58; and Col. 30, L. 1-31, L. 61-Col. 31, L. 3); and

a dispatcher (i.e. service manager 1140 in figure 11A) for collecting the commonly scaled weighted health metrics (i.e. level of load as a weight factor which is a number of connections being serviced by each server) (i.e. weights) from said servers (i.e. servers 1-4) by polling said servers for the weighted health metrics (i.e. retrieving the weights for each machine is considered as polling the weights for each server) (Col. 30, L. 43-52; and Col. 32, L. 23-41) and distributing jobs to said servers based thereon (figure 14; and Col. 3, L. 59-Col. 4, L. 3; and Col. 30, L. 1-49; and Col. 31, L. 53-Col. 32, L. 51).

Albert fails to teach different resource usage characteristics. However, Richter, in the same field of endeavor having closely related objectivity, teaches different resource usage characteristics (paragraph 368,372,374-375,380).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated Richter's teachings of different

resource usage characteristics, in the teachings of Albert in load balancing using distributed forwarding agents with application based feedback for different virtual machines, for provide an advantage for generating load balancing for processing engines.

3. Claim 2, Albert and Richter disclose the invention substantially as claimed.

Richter teaches wherein the resource usage characteristics comprise at least one processing utilization characteristic and at least one input/output utilization characteristic (paragraph 368,372,374-375,380).

4. Claim 3, Albert and Richter disclose the invention substantially as claimed. Albert teaches further comprising a knowledge base for cooperating with said dispatcher (i.e. service manager) for storing the weighted health metrics (i.e. weights) (Col. 31, L. 49-59).

5. Claim 5, Albert and Richter disclose the invention substantially as claimed. Albert teaches wherein said servers provide completed job results to said dispatcher (i.e. service manager), and wherein the weighted health metrics are provided to said dispatcher with the completed job results (i.e. "the feedback messages from the real machines is that the messages somehow express the level of load on

the real machine as a result of handling connections”, and “a process executed on a server for determining a weight to be sent to the service manager in a feedback message...Next, in a step 1206, the server determines the remaining processing capacity”. From these quotation notes, it does teach the weights are sent to the service manger with the completed job/process results) (Col. 30, L. 1-31).

6. Claim 6, Albert and Richter disclose the invention substantially as claimed. Albert teaches further comprising at least one load generator (i.e. load balance engine/algorithm) for generating the jobs for said servers and communicating the jobs to said dispatcher; and wherein said dispatcher further provides the completed job results to said at least one load generator (Col. 3, L. 59-Col. 4, L. 3; and Col. 8, L. 57-67; and Col. 9, L. 16-22; and Col. 11, L. 56-65; and Col. 12, L. 46-49; and Col. 30, L. 1-31).
7. Claim 9, Albert teaches a load distributor for a plurality of servers (i.e. servers 1-3) connected together in a network (i.e. network 210) for processing a plurality of different job types (i.e. process incoming and outgoing packets) having respective same resource usage characteristics (i.e. usage of processing capacity) associated therewith (Col. 6, L. 51-55; and Col. 13, L. 60-65; and Col. 30, L. 14-31; and Col. 31, L. 53-59), and each server determining a respective

health metric (i.e. level of load as a weight factor which is a number of connections being serviced by each server) thereof based upon at least one job being processed thereby and weighting the health metric (i.e. weight) based upon the respective resource usage characteristic of the at least one job (i.e. usage of processing capacity) (figure 14; and Col. 30, L. 1-31; and Col. 31, L. 53-59; and Col. 32, L. 49-51), the load distributor comprising:

a dispatcher (i.e. service manager 1140 in figure 11A) for collecting the weighted health metrics (i.e. weights) from the servers (i.e. servers 1-4) by polling said servers for the weighted health metrics (i.e. retrieving the weights for each machine is considered as polling the weights for each server) (Col. 30, L. 43-52; and Col. 32, L. 23-41) and distributing jobs to the servers based thereon (figure 14; and Col. 3, L. 59-Col. 4, L. 3; and Col. 30, L. 1-49; and Col. 31, L. 53-Col. 32, L. 19); and

said servers mapping the weighted health metrics (i.e. weights) for same resource usage characteristics to a common scale (i.e. a common level) (Col. 3, L. 51-58; and Col. 30, L. 1-31, L. 61-Col. 31, L. 3); and

a knowledge base for cooperating with said dispatcher (i.e. service manager) for storing the commonly scaled weighted health metrics (i.e. weights) (Col. 31, L. 49-59).



Albert fails to teach different resource usage characteristics. However, Richter, in the same field of endeavor having closely related objectivity, teaches different resource usage characteristics (paragraph 368,372,374-375,380).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated Richter's teachings of different resource usage characteristics, in the teachings of Albert in load balancing using distributed forwarding agents with application based feedback for different virtual machines, for provide an advantage for generating load balancing for processing engines.

8. Claim 14, Albert teaches a job distribution method for a plurality of servers (i.e. servers 1-3) connected together in a network (i.e. network 210), the servers for processing a plurality of different job types (i.e. process incoming and outgoing packets) having respective different resource usage characteristics (i.e. usage of processing capacity) associated therewith (Col. 6, L. 51-55; and Col. 13, L. 60-65; and Col. 30, L. 14-31; and Col. 31, L. 53-59), the method comprising:

determining a respective health metric of each server (i.e. determining level of load as a weight factor which is a number of connections being serviced by each server) based upon at least one job being processed thereby and weighting the health metric (i.e. weight) based upon the respective resource

Art Unit: 2445

usage characteristic of the at least one job (i.e. usage of processing capacity) (figure 14; and Col. 30, L. 1-31; and Col. 31, L. 53-59; and Col. 32, L. 49-51); and

polling the servers for the weighted health metrics (i.e. retrieving the weights for the machines is considered as polling the weights for the servers) (Col. 30, L. 43-52; and Col. 32, L. 23-41) mapping the weighted health metrics (i.e. weights) for same resource usage characteristics to a common scale (i.e. a common level) (Col. 3, L. 51-58; and Col. 30, L. 1-31, L. 61-Col. 31, L. 3); and

distributing jobs to the servers based upon the commonly scaled weighted health metrics (figure 14; and Col. 3, L. 59-Col. 4, L. 3; and Col. 30, L. 1-49; and Col. 31, L. 53-Col. 32, L. 19).

Albert fails to teach different resource usage characteristics. However, Richter, in the same field of endeavor having closely related objectivity, teaches different resource usage characteristics (paragraph 368,372,374-375,380).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated Richter's teachings of different resource usage characteristics, in the teachings of Albert in load balancing using distributed forwarding agents with application based feedback for different virtual machines, for provide an advantage for generating load balancing for processing engines.

9. Claims 10,12 are corresponding apparatus claims of system claims 2,5.

Therefore, they are rejected under the same rationale.

10. Claim 15 is corresponding method claim of system claim 2. Therefore, it is rejected under the same rationale.

11. Claims 17-18,20 are corresponding computer-readable medium claims of apparatus claims 9-10,12. Therefore, they are rejected under the same rationale.

12. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Albert and Richter as applied to claim 1 above, and further in view of Ross et al. (Ross) (US 6,263,212B1).

13. Claim 8, Albert and Richter are relied upon for the disclosure set forth in the previous rejection. Albert teaches the jobs relate to IP packet processing (Col. 6, L. 51-63; and Col. 7, L. 31-39).

Albert and Richter fail to teach the jobs relate to electronic mail (e-mail) processing. However, Ross, in the same field of endeavor having closely related objectivity, teaches the jobs relate to electronic mail (e-mail) processing (Col. 6, L. 1-10).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated Ross's teachings of the jobs relate to electronic mail (e-mail) processing, with Richter's teachings of different

Art Unit: 2445

resource usage characteristics, in the teachings of Albert in load balancing using distributed forwarding agents with application based feedback for different virtual machines, for provide an advantage for generating load balancing for email processing.

### ***Response to Arguments***

Applicant's arguments filed 11/11/08 have been fully considered but they are not persuasive.

(A) The combination of Albert and Richter fails to disclose a dispatcher for collecting the commonly scaled weighted health metrics from the servers by polling the servers for the weighted health metrics and distributing jobs to the servers based thereon.

As to point (A), in response to applicant's argument, Albert does disclose a dispatcher (i.e. a service manager 1140 in figure 11A is considered as a dispatcher) for collecting the commonly scaled weighted health metrics (i.e. a level of load, which is a number of connections being serviced by each server, is same as a weight factor. There are many weight factors from the many servers. These weight factors are considered as a commonly scaled weight health metrics) from said servers (i.e. servers 1-4) by polling said servers for the weighted health metrics (i.e. retrieving the weights for each machine is considered as polling the weights for each server) [Col. 30, L. 43-52; and Col. 32,

L. 23-41] and distributing jobs to said servers based thereon [figure 14; and Col. 3, L. 59-Col. 4, L. 3; and Col. 30, L. 1-49; and Col. 31, L. 53-Col. 32, L. 51].

In addition, Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine Richter's feature of different resource usage characteristics with Albert's features to provide and generate load balancing for processing engines or servers.

Therefore, the combination of Albert and Richter does disclose a dispatcher for collecting the commonly scaled weighted health metrics from the servers by polling the servers for the weighted health metrics and distributing jobs to the servers based thereon.

### ***Conclusion***

Applicant's amendment necessitated the rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

Art Unit: 2445

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH-CHAU NGUYEN whose telephone number is (571) 272-4242. The examiner can normally be reached on 7AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JASON CARDONE can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2445

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patrice Winder/  
Primary Examiner, Art Unit 2445

/M. N./  
Examiner: Minh-Chau Nguyen, Art Unit 2445